

September 7, 1948.

Dr. Morrison Rogosa,
National Institute of Health,
Bethesda 14, Maryland.

Dear Dr. Rogosa,

I have just read your paper "Mechanism of the fermentation of lactose by yeasts" which appeared in the last J.B.C. As we have been working for some time on the genetic control of lactose-splitting enzymes in *Escherichia coli* your work is of special interest.

We have reason to believe that several divergent mechanisms may operate in the utilization of disaccharides by *coli*. For example, certain genetic combinations give bacteria which can ferment maltose rapidly, but glucose only at a negligible rate, and there is some direct evidence of a phosphorylative step/

On the other hand, we have reason to believe that in our *E. coli*, the primary step in lactose utilization is its hydrolysis by a galactosidase, and that phosphorylation plays a minor role, if at all, at this stage. However, we have not yet gotten far enough along on this work that it would be profitable to discuss it in any detail.

In pursuing this work, it would be useful to have a pair of contrasting yeast strains which from your work you might be willing to conclude fermented lactose directly and indirectly, respectively: i.e., a pair of strains which actively ferment lactose but which do not, or do, possess a demonstrable and active lactase. If you can send me such strains, and a culture of *S. chevalieri* as well, for galactose assay, I would be most appreciative.

Yours sincerely,

Joshua Lederberg
Assistant Professor of Genetics.

P.S. Can you send me also your publications on this subject. Thank you.